

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended): A method for correcting an optical beam for spherical aberration in a scanning imaging system as received, the method comprising:

receiving the optical beam from an external source; and

correcting the received optical beam for an unknown amount of spherical aberration caused by an external source.

2. (Original): The method of Claim 1, wherein the spherical aberration correcting comprises sending the optical beam through a plurality of lenses.

3. (Original): The method of Claim 2, wherein sending the optical beam through a plurality of lenses performs cancellation of spherical aberration created when the optical beam is outputted from the scanning imaging system as a converged optical beam and sent through a flat plate prior to focusing on a target object.

4. (Original): The method of Claim 3, wherein the plurality of lenses forms an afocal element.

5. (Original): The method of Claim 4, wherein the optical beam received by the plurality of lenses is a collimated beam having a specific diameter and an output of the plurality of lenses is a collimated beam having the same diameter as the received collimated beam.

6. (Currently Amended): A method for correcting an optical beam for spherical aberration in a scanning imaging system as received, the method comprising:

receiving the optical beam from an external source; and
correcting the received optical beam for spherical aberration. The method of Claim 1,
wherein spherical aberration correcting comprises transforming the received optical
beam into an annulus.

7. (Original): The method of Claim 6, wherein transforming the internal optical beam into an annulus comprises performing at least a partial block of the optical beam.

8. (Original): The method of Claim 7, wherein performing at least a partial block of the optical beam includes blocking a portion of the optical beam with a holographic element.

9. (Original): The method of Claim 7, wherein performing at least a partial block of the optical beam includes blocking a portion of the optical beam with a catadioptric element.

10. (Currently Amended): A scanning imaging system comprising:

an objective for converging an optical beam received from an external source through a flat plate onto an object; and
a component for correcting the optical beam for an unknown amount of spherical aberration produced by the flat plate.

11. (Original): The system of Claim 10, wherein the component comprises a plurality of lenses.

12. (Original): The system of Claim 11, wherein the plurality of lenses performs cancellation of spherical aberration produced by the flat plate.

13. (Original): The system of Claim 11, wherein the plurality of lenses comprises two convex lenses and two concave lenses.

14. (Original): The system of Claim 11, wherein the component is an afocal element.

15. (Currently Amended): ~~The system of Claim 10;~~ A scanning imaging system comprising:
an objective for converging an optical beam received from an external source through
a flat plate onto an object; and
a component for correcting the optical beam for spherical aberration produced by the
flat plate,
wherein the component transforms the received optical beam into an annulus.

16. (Original): The system of Claim 15, wherein the component partially blocks the optical beam.

17. (Original): The system of Claim 16, wherein the component comprises a holographic element.

18. (Original): The system of Claim 16, wherein the component comprises a catadioptric element.